



2

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/045,072

DATE: 01/28/2002

TIME: 14:08:17

Input Set : A:\seqlist-15330790002 ascii
Output Set: N:\CRF3\01282002\J045072.raw

ENTERED

RAW SEQUENCE LISTING
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186	Gly	Tyr	Gly	Phe	Leu	Ser	Glu	Asn	Ala	Gln	Leu	Ala	Arg	Glu	Cys	Ala	
189				95					100				105				
195	gaa	aac	ggc	att	act	ttt	att	ggc	cca	acc	cca	gag	gtt	ctt	gat	ctc	567
198	Glu	Asn	Gly	Ile	Thr	Phe	Ile	Gly	Pro	Thr	Pro	Glu	Val	Leu	Asp	Leu	
201				110				115				115			120		
207	acc	ggt	gat	aag	tct	cgc	gcg	gta	acc	gcc	gcg	aag	aag	gct	ggt	ctg	615
210	Thr	Gly	Asp	Lys	Ser	Arg	Ala	Val	Thr	Ala	Ala	Lys	Lys	Ala	Gly	Leu	
213				125				130				130			135		
219	cca	gtt	ttg	gcg	gaa	tcc	acc	ccg	agc	aaa	aac	atc	gat	gag	atc	gtt	663
222	Pro	Val	Leu	Ala	Glu	Ser	Thr	Pro	Ser	Lys	Asn	Ile	Asp	Glu	Ile	Val	
225				140			145				145		150			155	
231	aaa	agc	gct	gaa	ggc	cag	act	tac	ccc	atc	ttt	gtg	aag	gca	gtt	gcc	711
234	Lys	Ser	Ala	Glu	Gly	Gln	Thr	Tyr	Pro	Ile	Phe	Val	Lys	Ala	Val	Ala	
237				160			165				165		170				
243	ggt	ggt	ggc	gga	cgc	ggt	atg	cgt	ttt	gtt	gct	tca	cct	gat	gag	ctt	759
246	Gly	Gly	Gly	Arg	Gly	Met	Arg	Phe	Val	Ala	Ser	Pro	Asp	Glu	Ile		
249				175			180				180		185				
255	cgc	aaa	tta	gca	aca	gaa	gca	tct	cgt	gaa	gct	gaa	gca	gtt	ttc	ggc	807
258	Arg	Lys	Leu	Ala	Thr	Glu	Ala	Ser	Arg	Glu	Ala	Glu	Ala	Ala	Phe	Gly	
261				190			195				195		200				
267	gat	ggc	gcf	gta	tat	gtc	gaa	cgt	gct	gtg	att	aac	cct	cag	cat	att	855
270	Asp	Gly	Ala	Val	Tyr	Val	Glu	Arg	Ala	Val	Ile	Asn	Pro	Gln	His	Ile	
273				205			210				210		215				
279	gaa	gtg	cag	atc	ctt	ggc	gat	cac	act	gga	gaa	gtt	gta	cac	ctt	tat	903
282	Glu	Val	Gln	Ile	Leu	Gly	Asp	His	Thr	Gly	Glu	Val	Val	His	Leu	Tyr	
285				220			225				225		230			235	
291	gaa	cgt	gac	tgc	tca	ctg	cag	cgt	cgt	cac	caa	aaa	gtt	gtc	gaa	att	951
294	Glu	Arg	Asp	Cys	Ser	Leu	Gln	Arg	Arg	His	Gln	Lys	Val	Val	Glu	Ile	
297				240			245				245		250				
303	gcg	cca	gca	cag	cat	ttg	gat	cca	gaa	ctg	cgt	gat	cgc	att	tgt	ggc	999
306	Ala	Pro	Ala	Gln	His	Leu	Asp	Pro	Glu	Leu	Arg	Asp	Arg	Ile	Cys	Ala	
309				255			260				260		265				
315	gat	gca	gta	aag	ttc	tgc	cgc	tcc	att	ggt	tac	cag	ggc	gcf	gga	acc	1047
318	Asp	Ala	Val	Lys	Phe	Cys	Arg	Ser	Ile	Gly	Tyr	Gln	Gly	Ala	Gly	Thr	
321				270			275				275		280				
327	gtg	gaa	ttc	ttg	gtc	gat	gaa	aag	ggc	aac	cac	gtc	ttc	atc	gaa	atg	1095
330	Val	Glu	Phe	Leu	Val	Asp	Glu	Lys	Gly	Asn	His	Val	Phe	Ile	Glu	Met	
333				285			290				290		295				
339	aac	cca	cgt	atc	cag	gtt	gag	cac	acc	gtg	act	gaa	gaa	gtc	acc	gag	1143
342	Asn	Pro	Arg	Ile	Gln	Val	Glu	His	Thr	Val	Thr	Glu	Glu	Val	Thr	Glu	
345				300			305				305		310			315	
351	gtg	gac	ctg	gtg	aag	gcf	cag	atg	cgc	ttg	gct	gct	ggt	gca	acc	ttg	1191
354	Val	Asp	Leu	Val	Lys	Ala	Gln	Met	Arg	Leu	Ala	Ala	Gly	Ala	Thr	Leu	
357				320			325				325		330				
363	aag	gaa	ttg	ggt	ctg	acc	caa	gat	aag	atc	aag	acc	cac	ggt	gca	gca	1239
366	Lys	Glu	Leu	Gly	Leu	Thr	Gln	Asp	Lys	Ile	Lys	Thr	His	Gly	Ala	Ala	
369				335			340				340		345				
375	ctg	cag	tgc	cgc	atc	acc	acg	gaa	gat	cca	aac	aac	ggc	ttc	cgc	cca	1287
378	Leu	Gln	Cys	Arg	Ile	Thr	Thr	Glu	Asp	Pro	Asn	Asn	Gly	Phe	Arg	Pro	

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381	350	355	360	
387	gat acc gga act atc acc gcg tac cgc tca cca ggc gga gct ggc gtt			1335
390	Asp Thr Gly Thr Ile Thr Ala Tyr Arg Ser Pro Gly Gly Ala Gly Val			
393	365	370	375	
399	cgt ctt gac ggt gca gct cag ctc ggt ggc gaa atc acc gca cac ttt			1383
402	Arg Leu Asp Gly Ala Ala Gln Leu Gly Gly Glu Ile Thr Ala His Phe			
405	380	385	390	395
411	gac tcc atg ctg gtg aaa atg acc tgc cgt ggt tcc gac ttt gaa act			1431
414	Asp Ser Met Leu Val Lys Met Thr Cys Arg Gly Ser Asp Phe Glu Thr			
417	400	405	410	
423	gct gtt gct cgt gca cag cgc gcg ttg gct gag ttc acc gtg tct ggt			1479
426	Ala Val Ala Arg Ala Gln Arg Ala Leu Ala Glu Phe Thr Val Ser Gly			
429	415	420	425	
435	gtt gca acc aac att ggt ttc ttg cgt gcg ttg ctg cgg gaa gag gac			1527
438	Val Ala Thr Asn Ile Gly Phe Leu Arg Ala Leu Leu Arg Glu Glu Asp			
441	430	435	440	
447	ttc act tcc aag cgc atc gcc acc gga ttc att gcc gat cac ccg cac			1575
450	Phe Thr Ser Lys Arg Ile Ala Thr Gly Phe Ile Ala Asp His Pro His			
453	445	450	455	
459	ctc ctt cag gct cca cct gct gat gat gag cag gga cgc atc ctg gat			1623
462	Leu Leu Gln Ala Pro Pro Ala Asp Asp Glu Gln Gly Arg Ile Leu Asp			
465	460	465	470	475
471	tac ttg gca gat gtc acc gtc aac aag cct cat ggt gtg cgt cca aag			1671
474	Tyr Leu Ala Asp Val Thr Val Asn Lys Pro His Gly Val Arg Pro Lys			
477	480	485	490	
483	gat gtt gca gct cct atc gat aag ctg cct aac atc aag gat ctg cca			1719
486	Asp Val Ala Ala Pro Ile Asp Lys Leu Pro Asn Ile Lys Asp Leu Pro			
489	495	500	505	
495	ctg cca cgc ggt tcc cgt gac cgc ctg aag cag ctt ggc cca gcc gcg			1767
498	Leu Pro Arg Gly Ser Arg Asp Arg Leu Lys Gln Leu Gly Pro Ala Ala			
501	510	515	520	
507	ttt gct cgt gat ctc cgt gag cag gac gca ctg gca gtt act gat acc			1815
510	Phe Ala Arg Asp Leu Arg Glu Gln Asp Ala Leu Ala Val Thr Asp Thr			
513	525	530	535	
519	acc ttc cgc gat gca cac cag tct ttg ctt gcg acc cga gtc cgc tca			1863
522	Thr Phe Arg Asp Ala His Gln Ser Leu Leu Ala Thr Arg Val Arg Ser			
525	540	545	550	555
531	ttc gca ctg aag cct gcg gca gag gcc gtc gca aag ctg act cct gag			1911
534	Phe Ala Leu Lys Pro Ala Ala Glu Ala Val Ala Lys Leu Thr Pro Glu			
537	560	565	570	
543	ctt ttg tcc gtg gag gcc tgg ggc ggc gcg acc tac gat gtg gcg atg			1959
546	Leu Leu Ser Val Glu Ala Trp Gly Gly Ala Thr Tyr Asp Val Ala Met			
549	575	580	585	
555	cgt ttc ctc ttt gag gat ccg tgg gac agg ctc gac gag ctg cgc gag			2007
558	Arg Phe Leu Phe Glu Asp Pro Trp Asp Arg Leu Asp Glu Leu Arg Glu			
561	590	595	600	
567	gcg atg ccg aat gta aac att cag atg ctg ctt cgc ggc cgc aac acc			2055
570	Ala Met Pro Asn Val Asn Ile Gln Met Leu Leu Arg Gly Arg Asn Thr			
573	605	610	615	

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579	gtg gga tac acc ccg tac cca gac tcc gtc tgc cgc gcg ttt gtt aag	2103
582	Val Gly Tyr Thr Pro Tyr Pro Asp Ser Val Cys Arg Ala Phe Val Lys	
585	620 625 630 635	
591	gaa gct gcc agc tcc ggc gtg gac atc ttc cgc atc ttc gac gcg ctt	2151
594	Glu Ala Ala Ser Ser Gly Val Asp Ile Phe Arg Ile Phe Asp Ala Leu	
597	640 645 650	
603	aac gac gtc tcc cag atg cgt cca gca atc gac gca gtc ctg gag acc	2199
606	Asn Asp Val Ser Gln Met Arg Pro Ala Ile Asp Ala Val Leu Glu Thr	
609	655 660 665	
615	aac acc gcg gta gcc gag gtg gct atg gct tat tct ggt gat ctc tct	2247
618	Asn Thr Ala Val Ala Glu Val Ala Met Ala Tyr Ser Gly Asp Leu Ser	
621	670 675 680	
627	gat cca aat gaa aag ctc tac acc ctg gat tac tac cta aag atg gca	2295
630	Asp Pro Asn Glu Lys Leu Tyr Thr Leu Asp Tyr Tyr Leu Lys Met Ala	
633	685 690 695	
639	gag gag atc gtc aag tct ggc gct cac atc ttg gcc att aag gat atg	2343
642	Glu Glu Ile Val Lys Ser Gly Ala His Ile Leu Ala Ile Lys Asp Met	
645	700 705 710 715	
651	gct ggt ctg ctt cgc cca gct gca acc aag ctg gtc acc gca ctg	2391
654	Ala Gly Leu Leu Arg Pro Ala Ala Val Thr Lys Leu Val Thr Ala Leu	
657	720 725 730	
663	cgc cgt gaa ttc gat ctg cca gtg cac acc cac gac act gcg	2439
666	Arg Arg Glu Phe Asp Leu Pro Val His Val His Thr His Asp Thr Ala	
669	735 740 745	
675	ggt ggc cag ctg gca acc tac ttt gct gca gct caa gct ggt gca gat	2487
678	Gly Gly Gln Leu Ala Thr Tyr Phe Ala Ala Gln Ala Gly Ala Asp	
681	750 755 760	
687	gct gtt gac ggt gct tcc gca cca ctg tct ggc acc acc tcc cag cca	2535
690	Ala Val Asp Gly Ala Ser Ala Pro Leu Ser Gly Thr Thr Ser Gln Pro	
693	765 770 775	
699	tcc ctg tct gcc att gtt gct gca ttc gcg cac acc cgt cgc gat acc	2583
702	Ser Leu Ser Ala Ile Val Ala Ala Phe Ala His Thr Arg Arg Asp Thr	
705	780 785 790 795	
711	ggt ttg agc ctc gag gct gtt tct gac ctc gag ccg tac tgg gaa gca	2631
714	Gly Leu Ser Leu Glu Ala Val Ser Asp Leu Glu Pro Tyr Trp Glu Ala	
717	800 805 810	
723	gtg cgc gga ctg tac ctg cca ttt gag tct gga acc cca ggc cca acc	2679
726	Val Arg Gly Leu Tyr Leu Pro Phe Glu Ser Gly Thr Pro Gly Pro Thr	
729	815 820 825	
735	ggt cgc gtc tac cgc cac gaa atc cca ggc gga cag ttg tcc aac ctg	2727
738	Gly Arg Val Tyr Arg His Glu Ile Pro Gly Gly Gln Leu Ser Asn Leu	
741	830 835 840	
747	cgt gca cag gcc acc gca ctg ggc ctt gcg gat cgt ttc gaa ctc atc	2775
750	Arg Ala Gln Ala Thr Ala Leu Gly Leu Ala Asp Arg Phe Glu Leu Ile	
753	845 850 855	
759	gaa gac aac tac gca gcc gtt aat gag atg ctg gga cgc cca acc aag	2823
762	Glu Asp Asn Tyr Ala Ala Val Asn Glu Met Leu Gly Arg Pro Thr Lys	
765	860 865 870 875	
771	gtc acc cca tcc tcc aag gtt gtt ggc gac ctc gca ctc cac ctc gtt	2871

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774	Val	Thr	Pro	Ser	Ser	Lys	Val	Val	Gly	Asp	Leu	Ala	Leu	His	Leu	Val	
777							880			885						890	
783	ggt	gcf	ggf	gtg	gat	cca	gca	gac	ttt	gct	gcc	gat	cca	caa	aag	tac	2919
786	Gly	Ala	Gly	Val	Asp	Pro	Ala	Asp	Phe	Ala	Ala	Asp	Pro	Gln	Lys	Tyr	
789							895			900						905	
795	gac	atc	cca	gac	tct	gtc	atc	gcf	ttc	ctg	cgc	ggc	gag	ctt	ggf	aac	2967
798	Asp	Ile	Pro	Asp	Ser	Val	Ile	Ala	Phe	Leu	Arg	Gly	Glu	Leu	Gly	Asn	
801							910			915						920	
807	cct	cca	ggf	ggc	tgg	cca	gag	cca	ctg	cgc	acc	cgc	gca	ctg	gaa	ggc	3015
810	Pro	Pro	Gly	Gly	Trp	Pro	Glu	Pro	Leu	Arg	Thr	Arg	Ala	Leu	Glu	Gly	
813							925			930						935	
819	cgc	tcc	gaa	ggc	aag	gca	cct	ctg	acg	gaa	gtt	cct	gag	gaa	gag	cag	3063
822	Arg	Ser	Glu	Gly	Lys	Ala	Pro	Leu	Thr	Glu	Val	Pro	Glu	Glu	Glu	Gly	
825							940			945						955	
831	gcf	cac	ctc	gac	gct	gat	gat	tcc	aag	gaa	cgt	cgc	aat	agc	ctc	aac	3111
834	Ala	His	Leu	Asp	Ala	Asp	Asp	Ser	Lys	Glu	Arg	Arg	Asn	Ser	Leu	Asn	
837							960			965						970	
843	cgc	ctg	ctg	ttc	ccg	aag	cca	acc	gaa	gag	ttc	ctc	gag	cac	cgt	cgc	3159
846	Arg	Leu	Leu	Phe	Pro	Lys	Pro	Thr	Glu	Glu	Phe	Leu	Glu	His	Arg	Arg	
849							975			980						985	
855	cgc	ttc	ggc	aac	acc	tct	gcf	ctg	gat	gat	cgt	gaa	ttc	ttc	tac	ggc	3207
858	Arg	Phe	Gly	Asn	Thr	Ser	Ala	Leu	Asp	Asp	Arg	Glu	Phe	Phe	Tyr	Gly	
861							990			995						1000	
867	ctg	gtc	gaa	ggc	cgc	gag	act	ttg	atc	cgc	ctg	cca	gat	gtg	cgc	acc	3255
870	Leu	Val	Glu	Gly	Arg	Glu	Thr	Leu	Ile	Arg	Leu	Pro	Asp	Val	Arg	Thr	
873							1005			1010						1015	
879	cca	ctg	ctt	gtt	cgc	ctg	gat	gcf	atc	tct	gag	cca	gac	gat	aag	ggf	3303
882	Pro	Leu	Leu	Val	Arg	Leu	Asp	Ala	Ile	Ser	Glu	Pro	Asp	Asp	Lys	Gly	
885							1020			1025						1030	
891	atg	cgc	aat	gtt	gtg	gcc	aac	gtc	aac	ggc	cag	atc	cgc	cca	atg	cgt	3351
894	Met	Arg	Asn	Val	Val	Ala	Asn	Val	Gly	Gln	Ile	Arg	Pro	Met	Arg		
897							1040			1045						1050	
903	gtg	cgt	gac	cgc	tcc	gtt	gag	tct	gtc	acc	gca	acc	gca	gaa	aag	gca	3399
906	Val	Arg	Asp	Arg	Ser	Val	Glu	Ser	Val	Thr	Ala	Thr	Ala	Glu	Lys	Ala	
909							1055			1060						1065	
915	gat	tcc	tcc	aac	aag	ggc	cat	gtt	gct	gca	cca	ttc	gct	ggf	gtt	gtc	3447
918	Asp	Ser	Ser	Asn	Lys	Gly	His	Val	Ala	Ala	Pro	Phe	Ala	Gly	Val	Val	
921							1070			1075						1080	
927	acc	gtg	act	gtt	gat	gaa	ggf	gtt	gag	gtc	aag	gct	gga	gat	gca	gtc	3495
930	Thr	Val	Thr	Val	Ala	Glu	Gly	Asp	Glu	Val	Lys	Ala	Gly	Asp	Ala	Val	
933							1085			1090						1095	
939	gca	atc	atc	gag	gct	atg	aag	atg	gaa	gca	aca	atc	act	gct	tct	gtt	3543
942	Ala	Ile	Ile	Glu	Ala	Met	Lys	Met	Glu	Ala	Thr	Ile	Thr	Ala	Ser	Val	
945							1100			1105						1110	
951	gac	ggc	aaa	atc	gat	cgc	gtt	gtg	gtt	cct	gct	gca	acg	aag	gtg	gaa	3591
954	Asp	Gly	Lys	Ile	Asp	Arg	Val	Val	Val	Pro	Ala	Ala	Thr	Lys	Val	Glu	
957							1120			1125						1130	
963	ggf	ggc	gac	ttg	atc	gtc	gtc	gtt	tcc	taa							3621
966	Gly	Gly	Asp	Leu	Ile	Val	Val	Val	Ser								

Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

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L:33 M:270 C: Current Application Number differs, Replaced Current Application No

L:33 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:2784 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38